

An electrolyte composition and method for planarizing a surface of a wafer using the electrolyte composition is provided. In one aspect, the electrolyte composition includes ammonium dihydrogen phosphate, diammonium hydrogen phosphate, or a mixture thereof. The composition has a pH between about 3 and about 10 which is environmentally friendly and does not present hazardous operation concerns. The composition may further comprise one or more additives selected from a group consisting of benzotriazole, ammonium citrate, ethylenediamine, tetraethylenepentamine, triethylenetetramine, diethylenetriamine, amino acids, ammonium oxalate, ammonia, ammonium succinate, and citric acid.